

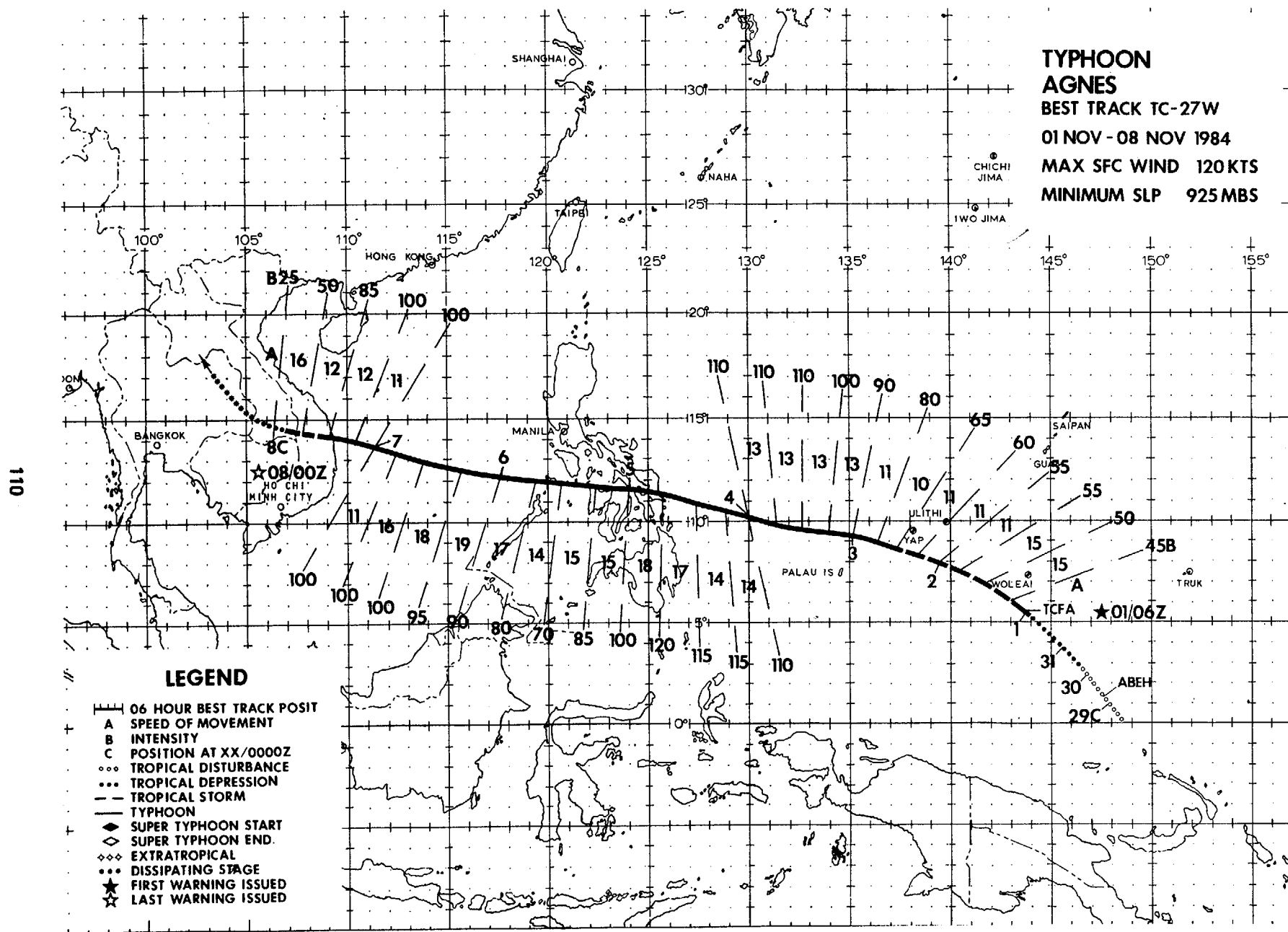
AGNES

BEST TRACK TC-27W

01 NOV - 08 NOV 1984

MAX SFC WIND 120 KTS

MINIMUM SLP 925 MBS



TYPHOON AGNES (27W)

Typhoon Agnes was the first of three tropical cyclones to develop during the month of November. It was also the last storm of the season to directly hit the Philippines. From the time of the first warning until it made landfall over central Vietnam, Agnes moved rapidly on a nearly straight west-northwest course.

The system that eventually developed into Typhoon Agnes began as an isolated area of weak convection near the equator on 28 October. Synoptic data at the time hinted that a weak 5 kt (3 m/s) surface circulation might be present beneath the convection near 1N 149E. The southwest monsoon at this time was restricted to the South China and northern Philippine Seas and did not assist in the development of this system. Even in its incipient stage, however, a small upper-level anticyclone was analyzed over the disturbance providing good ventilation.

The system slowly developed during the next three days as the area of convection and associated weak circulation moved northwest to near 4N. Late on the 31st, satellite imagery revealed that a significant increase in convection and organization was taking place. This prompted the issuance of a TCFA at 0000Z on 1 November.

During the next six hours the disturbance rapidly pulled itself together into a potent, compact circulation. The first aircraft reconnaissance mission into the alert area at 010513Z found a closed circulation with maximum surface winds of 50 kt (26 m/s). Analysis of satellite imagery conducted just prior to the flight had indicated that only 35 kt (18 m/s) winds were to be expected. The first warning on Agnes as a tropical storm was issued a short time later at 010600Z.

From the time the disturbance was initially detected until the TCFA was issued, Agnes had moved slowly to the northwest. By early on the 1st, Agnes had moved far enough north to be influenced by the easterly flow along the south side of the broad mid- to low-level subtropical ridge which now extended from the dateline west to the coast of Vietnam. This ridge and its associated easterly steering flow persisted throughout the life of Typhoon Agnes and kept the storm on a west-northwest track from the 1st of November until it

dissipated over Vietnam six days later. This ridge was also responsible for making Agnes' wind field asymmetric. Due to the enhancement of the storm's circulation by the easterly trades, Agnes' wind field was consistently stronger and extended to a larger radii in the northern semicircle. This asymmetry would be present throughout much of the life of Agnes.

As Agnes transited the Philippine Sea it steadily intensified reaching a peak intensity of 120 kt (62 m/s) at 041800Z. This peak intensity occurred just prior to Agnes making landfall 10 nm (19 km) south of Borongan (WMO 98553) on the central Philippine Island of Samar. Figure 3-27-1 is satellite imagery of Agnes approximately twelve hours prior to reaching maximum intensity.

Agnes weakened as it crossed the central Philippines, but due to its rapid speed of movement was able to maintain typhoon intensity. After emerging in the South China Sea, Agnes once again intensified, this time to 100 kt (51 m/s). Agnes maintained this intensity until it made landfall 20 nm (37 km) north of Qui-Nhon, Vietnam (WMO 48870) at approximately 1100Z on 7 November (Figure 3-27-2). After landfall Agnes continued to track to the west-northwest and rapidly weakened. The final warning by JTWC was issued at 080000Z.

Typhoon Agnes caused substantial damage and loss of life when it crossed the Philippine Islands. Storm surge flooding of low-lying coastal areas on the islands of Samar and Leyte was particularly severe. In addition, heavy rainfall caused extensive flooding. The winds, floods and mudslides combined to leave over 350,000 homeless. At least 564 people are known dead as a result of the storm. When the number dead are combined with the number of people reported missing, the final death count is expected to be near 1000. News reports indicated that the damage exceeded 600 million pesos (30 million U.S. dollars).

When Typhoon Agnes made landfall on Vietnam three days later, there was additional destruction of property and loss of life. Heavy rains brought flooding which severely affected the rice harvest and winter crop cultivation.

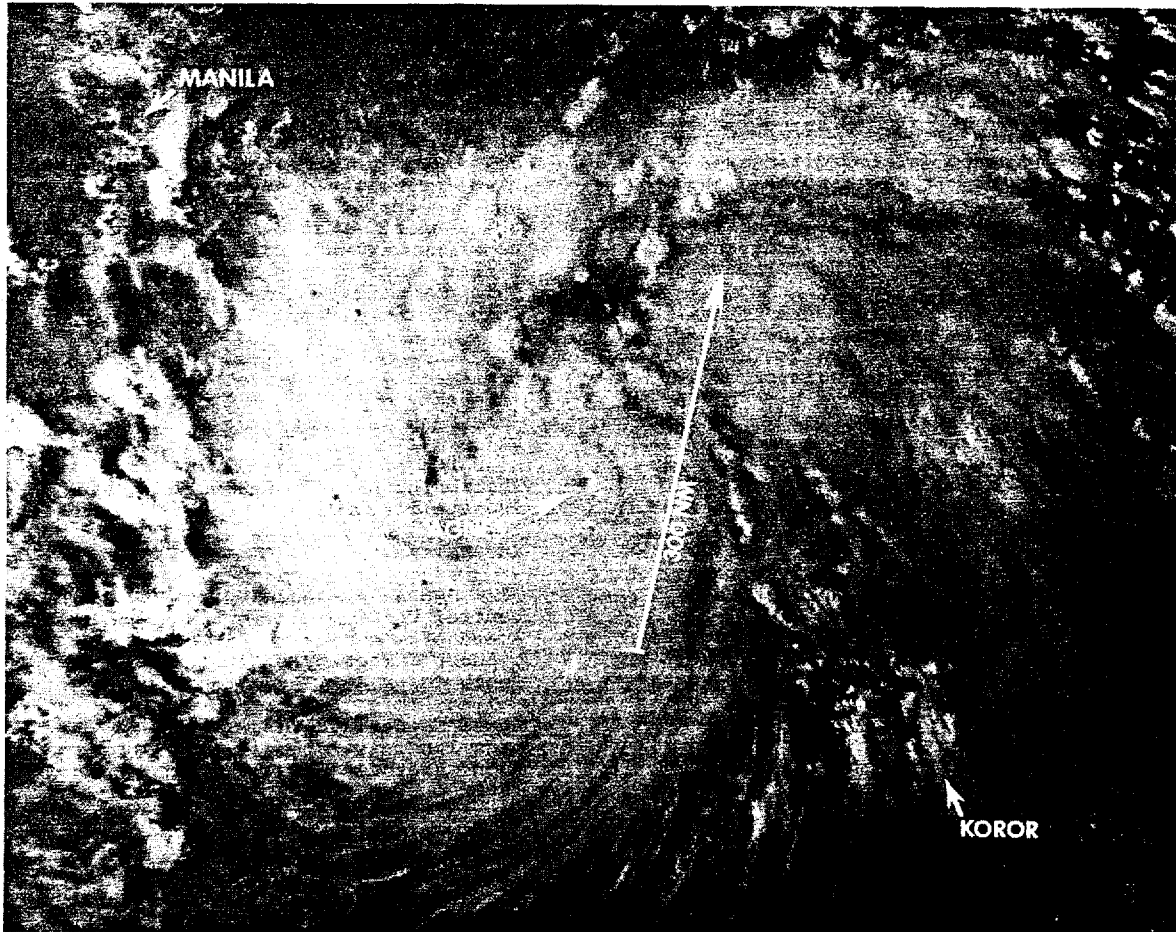


Figure 3-27-1. Agnes just prior to attaining peak intensity. At this time Agnes had a 5 nm (9 km) eye (040657Z November NOAA visual imagery).

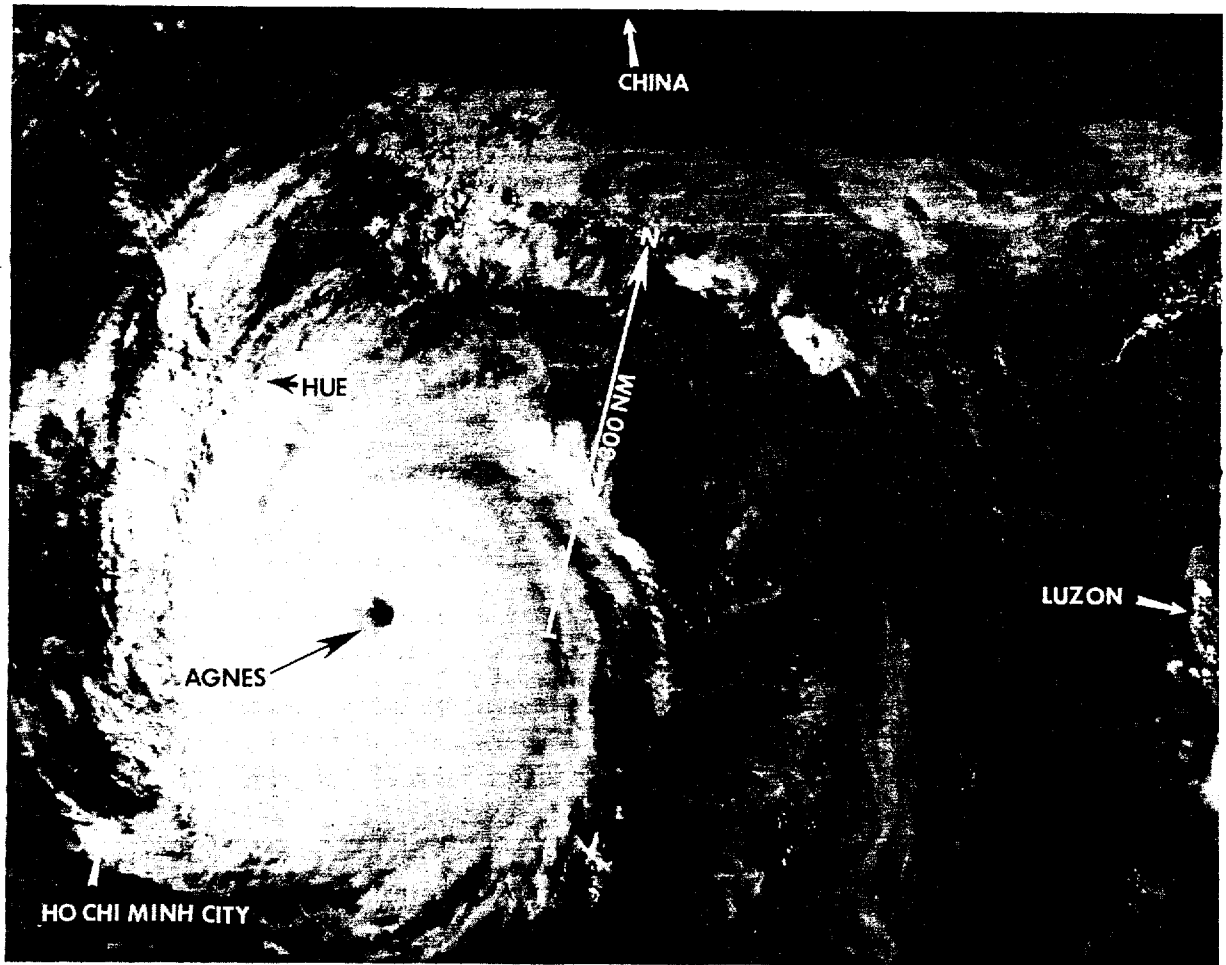


Figure 3-27-2. Typhoon Agnes at 100 kt (51 m/s) intensity just prior to making landfall over central Vietnam (070801Z November NOAA visual imagery).